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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,502	02/27/2002	Koji Yamamoto	219455USOPCT	3397

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EXAMINER	
NGUYEN, TAM M	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/069,502	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE f this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5, 7, 8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,525,235. Although the conflicting claims are not identical, they are not patentably distinct from each other because the two sets of claims claim a process of manufacturing 2,6-dimethylnaphathlene including steps of crystallization, solid-liquid separation, and purifying the separated solid. The patented claimed process does not specifically claim that the solvent is used in the washing step. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the patented claims by washing the solid with solvent because washing the solid with a solvent is known to produce a high purified product. (See col. 1, line 64 through col. 2, line 5)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 11, 13, 15, 16, and rejected under 35 U.S.C. 102(b) as being anticipated by Nagaoka et al. (EP 0939068).

Nagaoka discloses a process for manufacturing highly pure 2,6-dimethylnaphthalene by cooling crystallization of a mixture containing dimethylnaphthalene which includes 2,6-dimethylnaphthalene and about 16 wt. % of 2,7-dimethylnaphthalene to produce a solid containing 80 wt. % or more of 2,6-dimethylnaphthalene and a mother liquid. The mother liquid is then separated from the solid by means of press-filtration. The solid is then washed with solvent which is then separated by distillation to produce a 2, 6-dimethylnaphthalene having a high purity of 99 wt. % or more wherein the solvent use in the process is benzene or toluene. (See entire patent)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 14, 18, 19, and 21-24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaoka et al. (EP 0939068)

Nagaoka does not specifically disclose that the feedstock comprises less than 25 wt. % of 2,6-dimethylnaphthalene. However, Nagaoka discloses that a feedstock comprising less than 40 wt. % of 2,6-dimethylnaphthalene can be used in the process. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Nagaoka by using a feedstock comprising the claimed amount of 2,6-dimethylnaphthalene because one of skill in the art would use a feed comprising any amount of 2,6-dimethylnaphthalene which is less than 40 wt. % including the claimed amount.

Nagaoka does not disclose that the washing step is performed at least twice and part or the entirety of a mother liquor obtained in a second washing step or in a subsequent washing step is used as a solvent in a washing step performed prior to the washing step at which the mother liquor is obtained. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Nagaoka by washing the solid twice as claimed because subsequent washing in the solid liquid separation step and to use the whole or part of the cleaning mother liquid obtained from the second and subsequent cleaning processes as the solvent for use in the cleaning process before the said cleaning could have been easily conceived by a person skill in the art to produce a high purified product.

Claims 12, 17, 20, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaoka et al. (EP 0939068) in view of Kobe et al. (JP-5331079)

Nagaoka does not specifically disclose that the press-filtration step is operated at a pressure of 10 kg/cm^2 or more. However, Kobe discloses the press-filtration step is operated at a pressure of 50 atm (51 kg/cm^2) or higher. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Nagaoka by using the Kobe pressure because such pressure is effective to separate solid from liquid.

Kobe does not specifically disclose that the press filtration is performed using a tube press. However, it is know that in press filtration, a tube press, filter press, a plate press, a cage press, belt press, and a screw press have an equivalent function. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have

modified the process of Kobe by using a tube press because one of skill in the art would use any press filtration including a tube press.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (703) 305-7715. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tam M. Nguyen
Examiner
Art Unit 1764

TN